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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/229,324	01/13/1999	YUKOH HIEI	760-262P	7108
2292	7590	03/11/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			HELMER, GEORGIA L	
			ART UNIT	PAPER NUMBER
			1638	

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/229,324

Applicant(s)

HIEI ET AL.

Examiner

Georgia L. Helmer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 35-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the Claims

1. The Office acknowledges receipt of Applicants Response; dated 8 December 2003.
2. Applicant has cancelled 17-34, and added new claims 35-54. Claims 35-54 are pending, and are examined in the instant action.
3. All rejections not addressed below have been withdrawn.
4. This action is made FINAL necessitated by Applicant's amendment.
5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Substitute Specification

6. The Applicant's Substitution Specification, paper no. 17, has been entered.

Claim Rejections - 35 USC § 112, second paragraph

7. Claims 50-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 50 and 54, line 4,

"a medium comprising at least one auxin and that induces...", "that" is ambiguous because it can refer to either "medium" or "auxin".

Claim Rejections - 35 USC § 112, first paragraph

8. Claims 43 and 49 (previous claim 30) remain rejected under 35 U.S.C. 112, first paragraph, because the specification lacks sufficient evidence that the claimed biological material (pTOK162) is either 1) reproducible, 2) known and readily available to the public, or 3) deposited in compliance with 37 C.F.R. 1.801-1.809. If the claimed biological material were deposited under the provisions of the Budapest Treaty, Applicant must provide a declaration stating that the claimed biological material was made under the provisions of the Budapest Treaty in compliance with 37 CFR 1.801-1.809, and that all restrictions imposed by the depositor on the availability to the public of the deposited biological material will be irrevocably removed upon the granting of the patent.

Applicant traverses, stating primarily that Figures 1 of the specification shows a map of pTOK162, and that this map together with the publication of Komari et. al. (Plant Cell Reports, 9, 303-306 (1990)), which provides a restriction map of plasmid pTOK162 and a description of how that plasmid was made from previously described materials, and assert that one of ordinary skill in the art could readily reproduce this plasmid. Applicant further states that the virulence regions of pTOK162 is derived from the plasmid pTiBo542, which is harbored by *Agrobacterium tumefaciens* A281, which is available from the American Type Culture Collection under the accession number 53487.

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Applicant's traversal has been considered and is unpersuasive. The map of pTOK162 does not enable one skilled in the art to reproduce an exact duplicate of Applicant's claimed pTOK162 necessary to practice the claimed invention, as no sequence data are disclosed. Accordingly, the claimed invention is not enabled without a proper deposit.

Accordingly this rejection is maintained.

Claim Rejections - 35 USC § 102

9. Claims 35, 36, 40, 41, 42, 44, 46, 50-52 and 54 are rejected under 35 U.S.C. 102(b) as being anticipated by Dale et. al., Agroinfection of Wheat: inoculation of in vitro grown seedlings and embryos, Plant Science, 1989, vol. 63, pages 237-245.

Dale teaches a method of transforming wheat comprising culturing seedlings and immature embryos (pages 238, 2nd ¶) in a medium comprising the auxin 2, 4-D (page 238, 5th ¶), coculturing with Agrobacterium tumefaciens C58 nalR comprising a wheat dwarf virus nucleotide of interest (page 238, 5th ¶), and culturing selected tissue to obtain a transformed wheat plant (p. 240, final ¶). Dale also teaches the Agrobacterium comprising the Ti plasmid C58/3 (p. 240, final ¶) virB and virG genes.

Accordingly, Dale anticipates the claimed invention.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 35, 36, 40, 41, 42, 44, 46, 47, 50-52 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dale et. al., as applied to claims 35, 36, 40, 41, 42, 44, 46, 50-52 and 54 above, and further in view of Fraley, et. al., Proc. Natl. Acad. Sci. USA, Vol 80, 1983, pages 4803-4807, and Grimsley, et. al. Biotechnology, Vol 6, 1988, pages 185-189.

The teachings of Dale are discussed above. Dale does not teach use of *Agrobacterium* present in the amount of 10^6 to 10^{11} cells/ml, contacting in liquid medium for 3-10 minutes then maintaining on solid medium, or use of the use of scutellum. Fraley teaches the use of *Agrobacteria* in the amount of 10^8 cells/ml (p. 4804, 1st 2 lines of 3rd full ¶) and contacting in liquid medium, then maintaining on solid medium (p. 4804, middle of 3rd full ¶). The use of amount of 10^8 cells/ml and contacting in liquid medium, then maintaining on solid medium is an obvious variation and reflects design choices, which were well within the knowledge and skill of one of ordinary skill in the art and could be used with reasonable expectation of success and without any surprising or unexpected results.

Grimsley, et. al. Biotechnology, Vol 6, 1988, pages 185-189, teach the Agrobacterium infection of maize scutellum (page 186, final 9 lines of page). It would have been obvious to one of skill in the art, at the time of the invention was made, to substitute the wheat seedlings of Dale with the maize scutellum of Grimsley, to provide Agrobacterium inoculation sites. Substituting the scutellum of Grimsley for the seedlings of Dale would be well within the means of one of skill, without any surprising or unexpected results. One skilled in the art would have been motivated to so, with a reasonable expectation of success.

Thus the claimed invention would have been prima facie obvious as a whole to one of ordinary skill in the art at the time it was made. Accordingly, the claimed invention is prima facie obvious in view of the prior art.

Remarks

12. No claims are allowed.

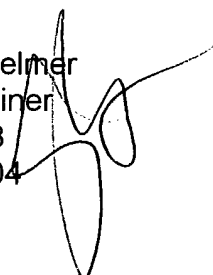
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Georgia L. Helmer whose telephone number is 571-272-0976. The examiner can normally be reached on 8:30 - 5:00.

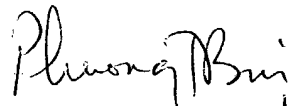
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on 571-272-0804. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Georgia L. Helmer
Patent Examiner
Art Unit 1638
March 8, 2004




PHUONG T. BUI 3/8/04
PRIMARY EXAMINER